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THE PROGRAMS OF
THE COMMUNICATION RESEARCH INSTITUTE

IN the beginning God created
the heaven and the earth
AND great whales, and man . . . . . *

* Book of Genesis

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COMMUNICATION RESEARCH INSTITUTE
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In addition to the above official members of the Committee, there are several other scientists who are acquainted with our scientific program and its results whose names will be furnished on request.

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WHAT IS THE COMMUNICATION RESEARCH INSTITUTE?

A BRIEF DESCRIPTION

The Institute is a non-profit organization devoted to research, education and publication in communication, language, brain function and marine mammology.

The Institute was founded and incorporated by Dr. John C. Lilly, a noted neurophysiologist.

CURRENT RESEARCH PROGRAM

WHAT IS C.R.I. LEARNING?

For the answer, one must look at one of the most unusual creatures of the sea — the bottlenose dolphin. Here is a mammal with a brain of a size larger and more complex than the human brain. The dolphin has astounded everyone, laymen and scientists, with its intelligence, compassion for man, and docility. The book MAN AND DOLPHIN, by Dr. John C. Lilly, published by Doubleday and Company, August 1961, narrates in detail this interesting subject.

Here then is the fascinating creature which the scientists can investigate. One of the most absorbing questions of our century — brain function and its relation to communication and behavior, can now be studied. The unexplored biological territory, of the large mammal brain affords an unequalled opportunity for tests in neurophysiology, brain function, communication and intelligence.

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Such research will benefit man in many ways:

1. Improved brain surgery techniques.
2. Expedite human learning and educational processes.
3. A more systematic approach to the measurement of inter-species intelligence.
4. A greater understanding of the function of the brain and nervous system.
5. Clarify the problems of learning and development of speech, its understanding, creation and translation.
6. Help man communicate with other species, even those alien to our planet.
7. Uncover the relationship between brain function and learning and emotion.

CURRENT RESEARCH PROGRAM

WHAT HAS C.R.I. LEARNED?

While the dolphin has been under scientific observation by others since 1914, relatively little is known about the animals.

Since incorporation, the following discoveries and techniques have been established:

1. The speed of learning of these animals is extremely high.
2. Dolphins have three communication systems: a whistling language; a system which employs sonic clicks, squawks, quacks and barks; and a sonar device in the ultrasonic region.
3. These animals can hear, analyze and even mimic human speech.
4. The physiology of their brain resembles that of a human.
5. Dolphins have remarkable forebearance, forgiveness, and lack of aggressive action against humans.
6. Emotional calls, such as distress signals have been identified and analyzed.

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7. The proper means of handling, maintaining, carrying, and, in general, experimenting with Dolphins without pain or injury.

8. Dolphins understand and act appropriately in response to verbal commands.

9. These animals make definite approached to humans, and exert great effort to attempt communication.

FUTURE RESEARCH PROGRAMS

Future dolphin research efforts will be in the immediate vicinity of the unknown, in three main areas:

Communication, neurology, and psychology.

1. Communication

Research efforts will be centered on the possibility of inter-species communication. As previously stated the brain of the dolphin is larger and more complex than the human brain. In general inter-species communication research possibilities range between two extremes: one is to teach the animal a human speech form, and the other would be for the human to learn the animal's language. Both of these approaches are being investigated at the same time. A breakthrough in either one of these areas would prove to be a major first. A third approach to the problem is currently being carried out using electronic and computer aids.

2. Neurology

In general future neurological research calls for a continued systematic and thorough investigation of the dolphins' brain functions and structures explored by electrical techniques.

Significant benefits from the research will be as follows:

1. Human brain surgery will benefit from techniques learned here. Intensive investigation of the dolphin's brain is offered, with advantages of brain "recovery" as compared with the human brain.

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3. A new appreciation and a theory of intelligence in relation to brain size is being developed.

4. Problems related to the broad fields of the intelligent and the mentally retarded may be rewarded by findings in this area.

3. Psychology

A systematic approach to the measurement of the intelligence of the dolphin is planned. The capability to move from mimicry to true language, plus the psychology of speech acquisition will also be investigated. In general these studies will lead to a greater understanding of: the function of the brain and nervous system as related to size and level of development; intellectual processes; emotion and the role of reward and punishment; and behavior, including language and communication.

EDUCATION AND VISITING SCIENTIST PROGRAM

The Institute is a unique organization with unusual facilities for research training and education. It is the first research institute in the world devoted to the long term study of the small whales (dolphins and porpoises). Because of our uniqueness, we feel these facilities should be shared with students, interested scientists and faculty members of universities and other institutions. The Institute also has a summer student program.

The summer student program was initiated in 1960, was continued in 1961, 1962, and is already planned for 1963. Six students are selected

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from 30 to 40 applicants. These students participate in the research and each are given a part of a project.

We have found this student program is stimulating to the staff and rewarding to the intelligent students.

FACILITIES

Laboratory facilities are located in Miami, Florida, and St. Thomas, U.S.Virgin Islands.

The St. Thomas property consists of a modern 10 room hurricane and earthquake proof laboratory, built directly over special dolphin sea pools and tanks. Monies for building these facilities came from a special National Science Facilities Grant. It is planned to expand these facilities over the next few years to include additional laboratory facilities and housing for scientific personnel, which are desperately needed.

The Miami facilities include laboratory and administrative space in which the main research programs are carried out. In addition these properties provide a logistic supply base for personnel and equipment.

PERSONNEL

The principal investigator is Dr. John C. Lilly, the Director, who is a biophysicist and neurophysiologist. The Institute's staff is augmented by appropriate scientific and administrative personnel as required.

FINANCIAL SUPPORT

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National Institute of Health; the Air Force Office of Scientific Research; and the National Aeronautics and Space Administration.

The Institute defrays all of its operating costs, expenses for student training, and some of its capital improvement costs.

OUR WORK DEPENDS ON YOUR HELP

Most urgently needed are funds which may be used for capital improvement land, and to extend provisions for student training.

Membership fees will serve the special needs of the Institute as follows:

AT ST. THOMAS

RETIREMENT OF MORTGAGE ON LAND AT ST. THOMAS	$ 45,000.
VISITING STUDENT LABORATORY, BUILDING AND EQUIPMENT	$150,000.
VISITING SCIENTISTS LABORATORY, BUILDING AND EQUIPMENT	$175,000.
STUDENT DORMITORY AND FURNISHINGS	$100,000.
VISITING SCIENTISTS LIVING QUARTERS AND FURNISHINGS	$130,000.
COMPLETE LIBRARY, BOOKS AND FURNISHINGS	$ 95,000.
STUDENT SCHOLASTIC AND SUPPORT	$ 75,000.
COMPUTER EQUIPMENT	$200,000.
NURSERY POOLS FOR BABY DOLPHINS, each	$ 500.
DOLPHIN PROCUREMENT BOAT	$ 50,000.
OTHER SPECIAL DOLPHIN POOLS, each	$ 1,000.
LIVE DOLPHINS AND DOLPHIN FOOD	$ 10,500.
PHOTO AND ELECTRONIC EQUIPMENT	$ 15,500.
SPECIAL PSYCHOLOGICAL AND PHYSIOLOGICAL APPARATUS	$ 2,300.

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AT ST. THOMAS (cont.)

TRANSPORTATION ALLOWANCES FOR MOVEMENT OF DOLPHINS, MEN AND ALLOWANCES TO ST. THOMAS	$ 5,000.

AT MIAMI

NEW LABORATORY AND ADMINISTRATION BUILDING	$1,500,000.

IN GENERAL

ADDITIONAL OPERATING SUPPORT	$ 50,000.

ENDOWMENT

Memorial and commemorative funds are welcome. These gifts may be made as single payments, as pledges payable over several years, or as bequests. Important purposes for which these funds are needed include:

1.	General Endowment in gifts of any amount	$2,000,000.
2.	Endowed Research Funds (each)	$100,000. up
3.	Endowed Research Scientist (each)	$600,000.
4.	Endowed Visiting Scientist (each)	$600,000.
5.	Endowed Research Fellowship (each)	$200,000.

MEMBERSHIP CONTRIBUTIONS

TO THE ASSOCIATES OF COMMUNICATION RESEARCH INSTITUTE

ANNUAL MEMBER	$50.00
ANNUAL FELLOW	$100.00
ANNUAL ASSOCIATE MEMBER	$500.00
LIFE FELLOW	$1000.00
SPONSOR	$2500.00
PATRON	$5000.00
ANNUAL CORPORATE ASSOCIATE	$1000.00

AT ST. THOMAS (cont.)

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2. Reprints of research reports and periodic papers, where requested.
3. Participation in annual field trip where space is available.
4. Copies of annual and semi-annual progress reports.
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